



# ***Pandemic Influenza***

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R. H. H. E.



"SON, IT'S TIME WE HAD A SERIOUS TALK ABOUT THE BIRDS AND BEES...."

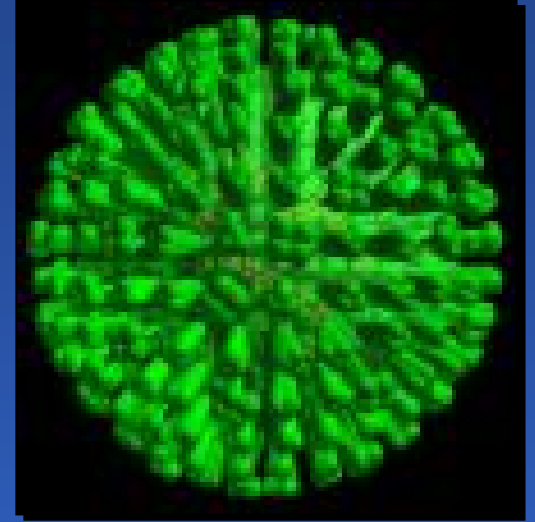
## Overview

- Influenza (“seasonal”)
- Keeping healthy during flu season
- Pandemic influenza
  - Avian influenza or “Bird flu”
- Plan for pandemic
- Question and answers



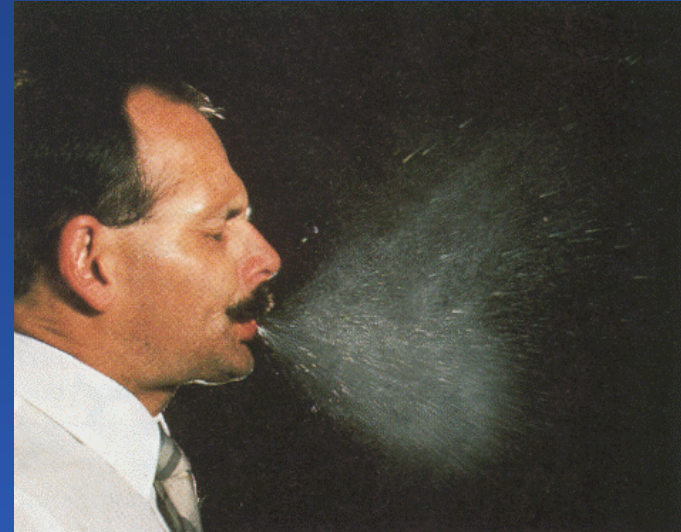
# The Influenza Virus

- Virus
  - Different types (A and B)
  - Named strains (H and N)
  - Affects respiratory tract
  - Changes (mutates) rapidly
  - Antibiotics don't help



# Spreading the Flu

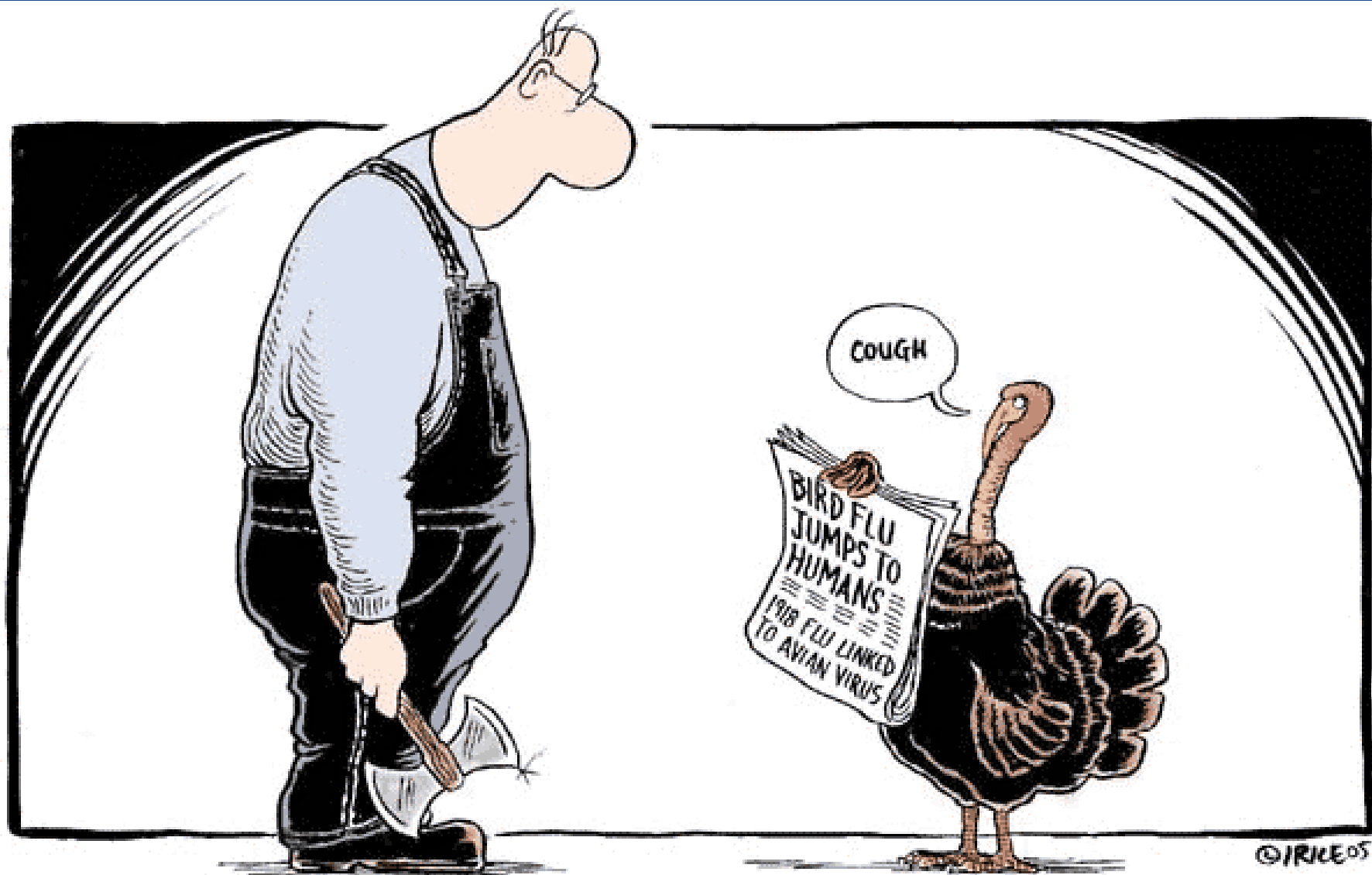
- Virus Spread
  - Sneezing and coughing
  - via droplets
  - via fomites
    - Inanimate object that spreads disease



# Influenza: Who, where, and when?

- Nearly everyone susceptible every year
  - Illnesses, hospitalizations, deaths
  - Usually older, younger and those with chronic illness
  - Influenza and complications (pneumonia)
  - Most of us have some immunity from repeated exposures
- Everywhere
  - Can't predict with certainty
- Seasonal
  - Winter





## A THANKSGIVING IMPASSE

From Ingrid Rice, \*Please include GST (#894554328) 1947 Queensbury Ave. N. Van, B.C., V7L 3W1 Tel:(604) 968-4347 Fax: (604) 990-0349

# Influenza: Signs and Symptoms

- Sudden onset
  - Lasts a few days
- Symptoms
  - Fever
  - Body aches
  - Headache
  - Cough
  - Excessive tiredness (malaise, fatigue)
- Rare complications (pneumonia)
- Rarely vomiting, diarrhea, or “stomach flu”
- Differs from the “common cold”





# Preventing the Flu: What You Can Do

1. Wash hands
2. Cover your mouth when you cough
3. Stay home when sick
4. Avoid crowds during outbreaks
5. Vaccination



# Vaccination

- Made of mixture of viral types
- New vaccine every year
  - Injectable forms (adults and children)
  - Nasal spray (FluMist™)
- Vaccines don't cause the flu



# Who Needs Vaccination?

- Vaccination most helpful for those at highest risk of complications:
  - People 65+ years
  - Residents of long-term--care facilities
  - People 2-64 years with other conditions
    - Includes asthma, diabetes, heart disease
  - Children less than 2 years old



## Others for Vaccination

- Pregnant women
- Health-care personnel
- Household contacts and child care givers of children aged 6 months or younger

Then, everyone else



# Treatment

- Treat symptoms
  - Fluids
  - Rest
  - Medication to reduce fever and body aches (avoid aspirin!)
- A virus, so antibiotics don't work
- Antiviral medications
  - Tamiflu™ (oseltamivir)
  - Symmetrel™ (amantadine)





"CRACKER SCHNACKER!...POLLY WANNA GAS MASK!!"

# Pandemic Influenza

- Global outbreak with:
  - Novel virus
    - Something humans have never seen
    - All or most people susceptible
  - Wide geographic spread
- Spread can be rapid
  - Transmissible from person to person
  - Spread before signs of illness
  - Overwhelm health care



# Novel Virus

- Since it's never been seen in humans, little to no immunity likely
- Anyone exposed could become infected
- May affect non-high risk groups
  - Those not traditionally seen as “high risk”
    - Healthy young adults?



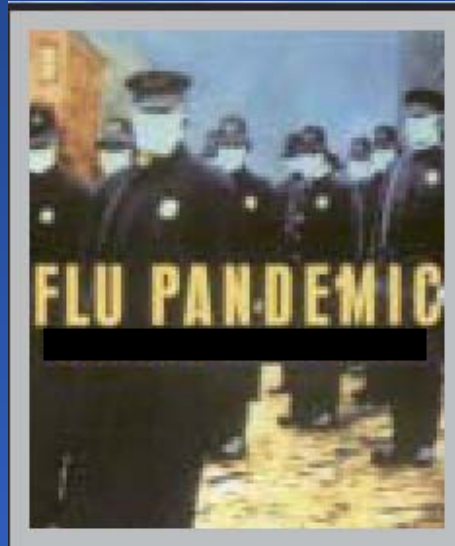


# Pandemic influenza

- More severe symptoms
  - Higher rates of complications
  - More deaths
- More impact on normal community function
- When do they happen
  - Unpredictable
  - More rare than “regular” flu
- Can a pandemic be prevented?
  - Nobody knows for sure



# Influenza Pandemics 20th Century



**1918: “Spanish Flu”**  
A(H1N1)

20-40 million deaths

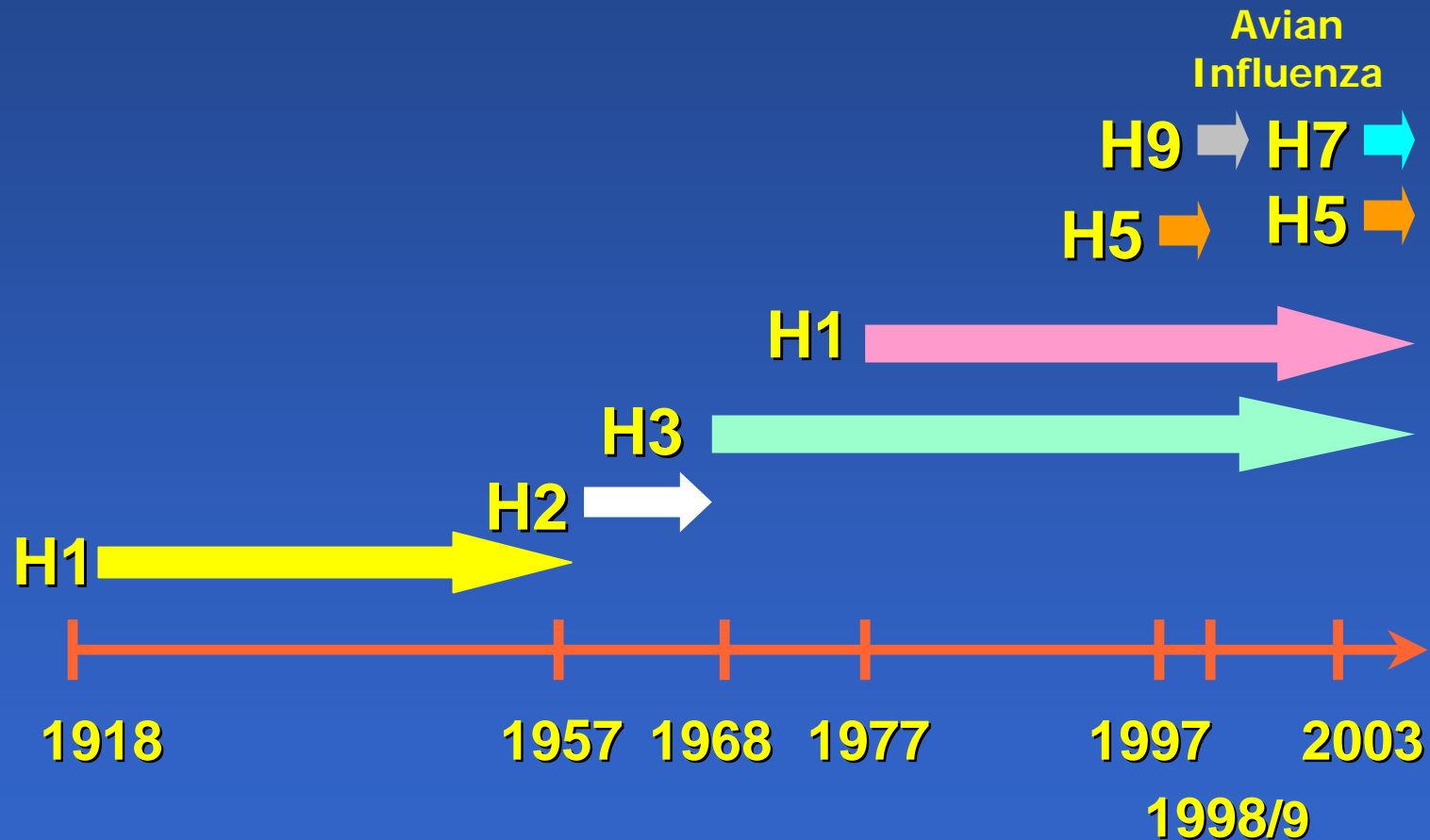
**1957: “Asian Flu”**  
A(H2N2)

1-4 million  
deaths

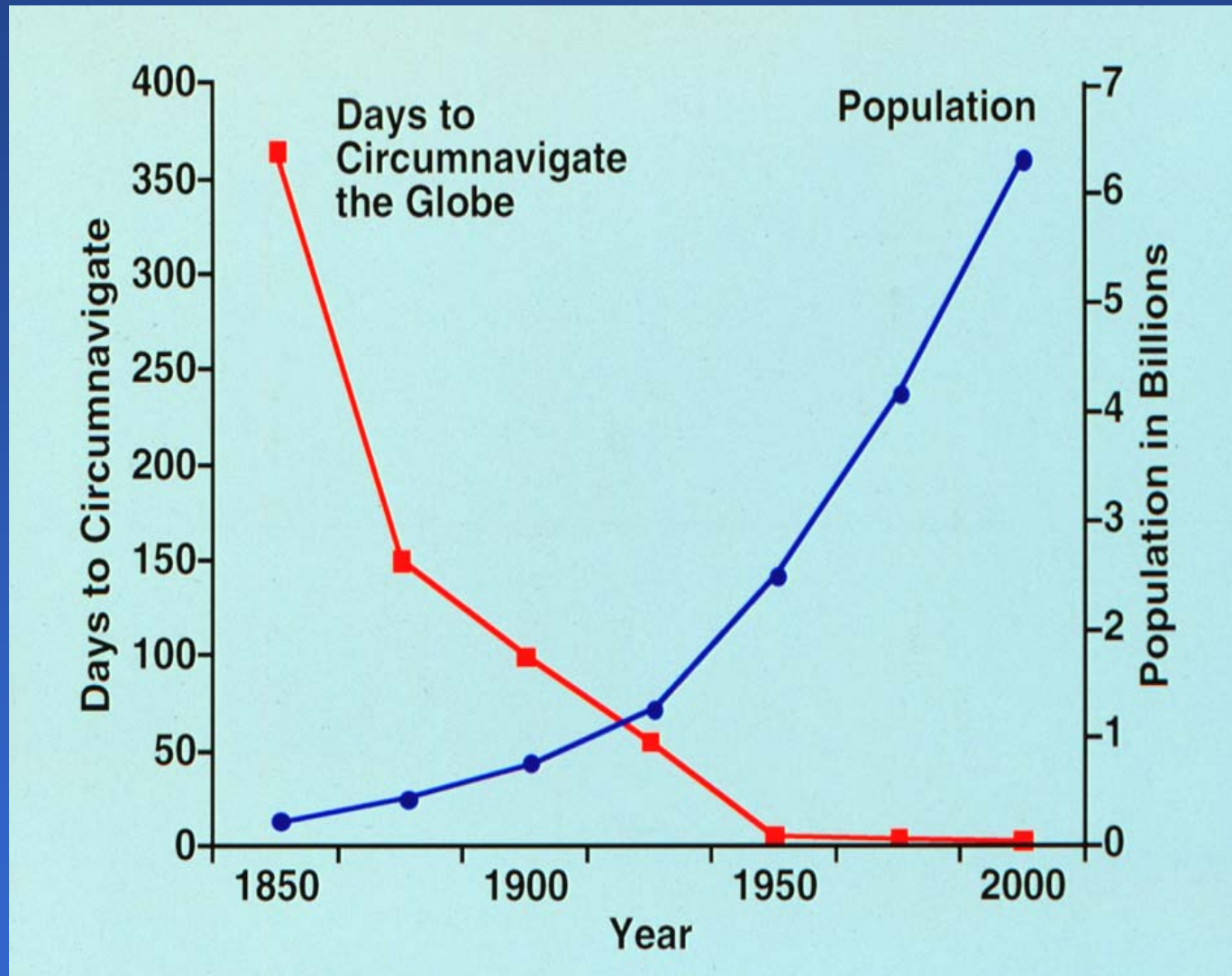
**1968: “Hong Kong  
Flu”** A(H3N2)

1-4 million deaths

# When Will the Next Influenza Pandemic Occur?



# How Fast Can a Pandemic Spread?



Jimmy,  
Answer me!!  
Please!



# Pandemic Influenza: Where Are We Now?

## *Interpandemic Period*

Phase 1

Phase 2

## *Pandemic Alert Period*

**Phase 3—current** →

- Report of new strain in humans
- Rare human-to-human spread

Phase 4

Phase 5

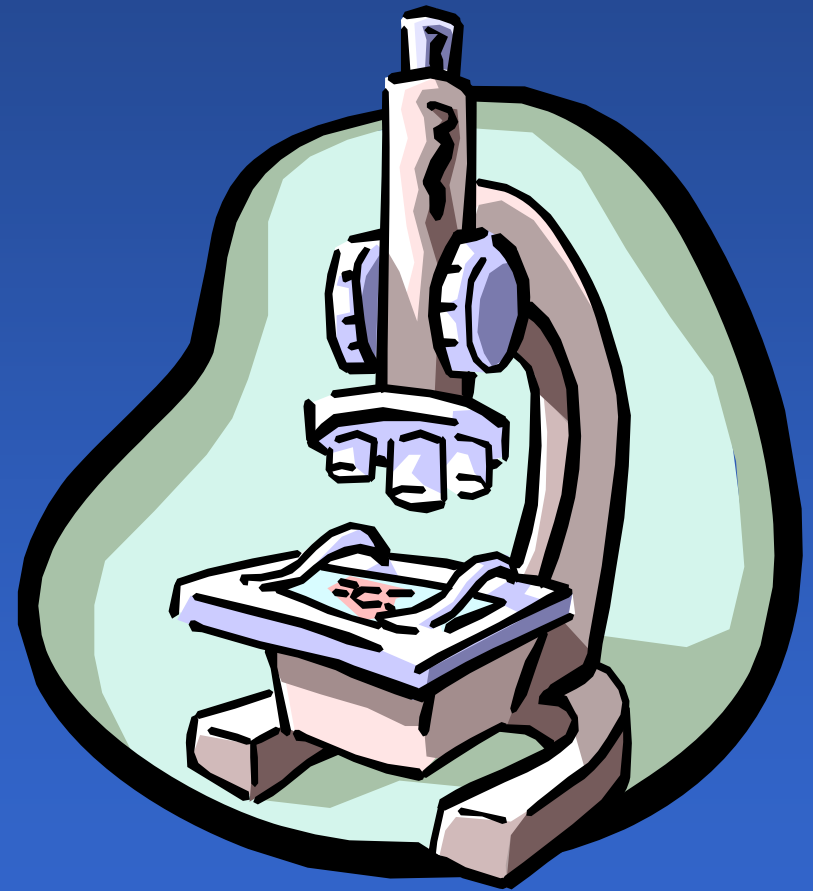
## *Pandemic Period*

Phase 6

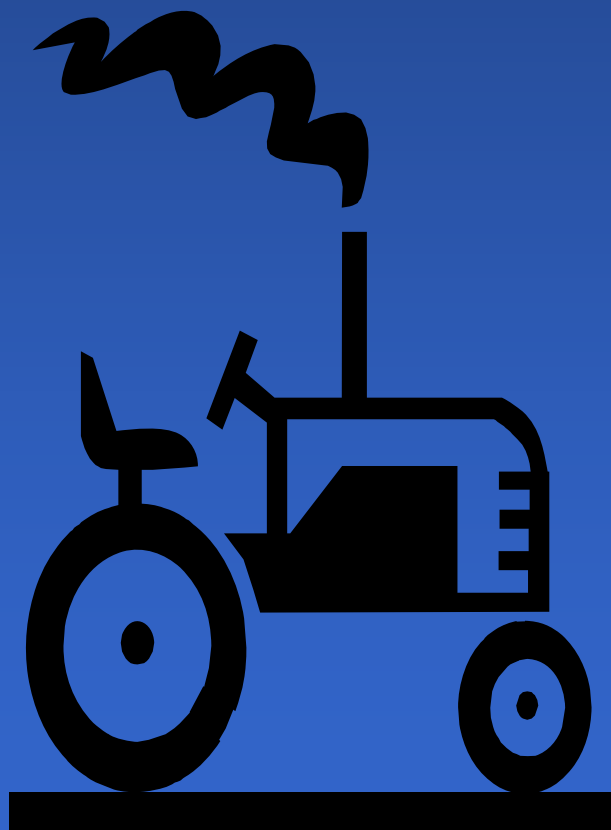


# Next Pandemic Impact: USA

- Attack rate ranging from 15% to 35%:
- Outpatient care: 18 – 42 million
- Hospitalizations: 314,000 - 733,000
- Deaths: 89,000 – 207,000



# Pandemic Impact: Kansas



- Attack rate ranging from 15% to 35%
- Outpatient care: 208,000 – 486,000
- Hospitalizations: 4,600 - 10,700
- Deaths: 1,100 – 2,500



# Avian Flu



*Gary Kuyel*  
THE INDIVIDUALS SHIP  
©2005 CREATOR'S SHIP  
- APPLIES TO WARNER BROS.

# Kansas Pandemic Influenza Plan...

## What's in it?



# Goals of Pandemic Influenza Plan

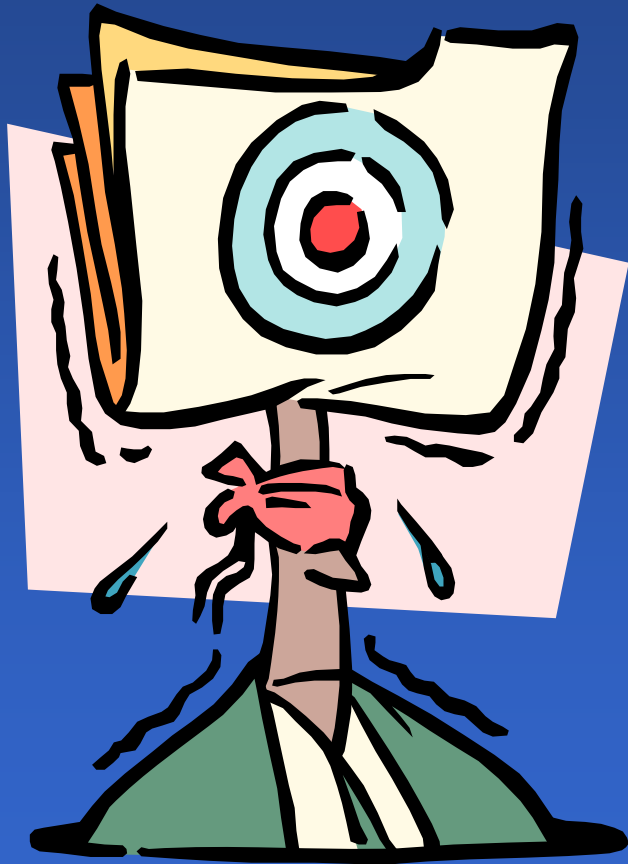
- Limit burden of disease
- Minimize social disruption
- Minimize economic impact

# State Plan: Focus Areas

- Surveillance
  - Tracking the disease
- Emergency Response
  - Health care providers, public health systems, and community agents must all partner at state and local levels to ensure effective response
  - Vaccine, antiviral delivery
  - Isolation and quarantine
- Communications/informing the public
  - Right time, right information, truth always



# The Plan is a Living Document...



- ...as the target keeps changing!
- Help us plan at [kdheks.gov](http://kdheks.gov)

## State Efforts

- “Flu Tour 2005”
- Multiple other presentations
- KU AHEC Flu Meetings
- Working with Parks and Wildlife, Agriculture, and Animal Health colleagues
- Advancing concept of “COOP” planning



# Federal Planning Efforts

- HHS “Pandemic Flu Summits”
- Federal bigwigs and Governors
- Promoting planning efforts
- Memorandum of Agreement (MOA) between HHS and states
  - Kansas signed its agreement in conjunction with the Kansas Flu Summit on May 31<sup>st</sup>



## Federal Dollars

- \$3.8 billion allocated by Congress
- \$350 million into state pandemic flu planning; “vast majority of funds” to go to locals
  - KS received \$1.1 million in first phase; 80% ATL
  - KS applying for \$2.29 million second phase
- Congress allocated another \$250 million to continue efforts another year

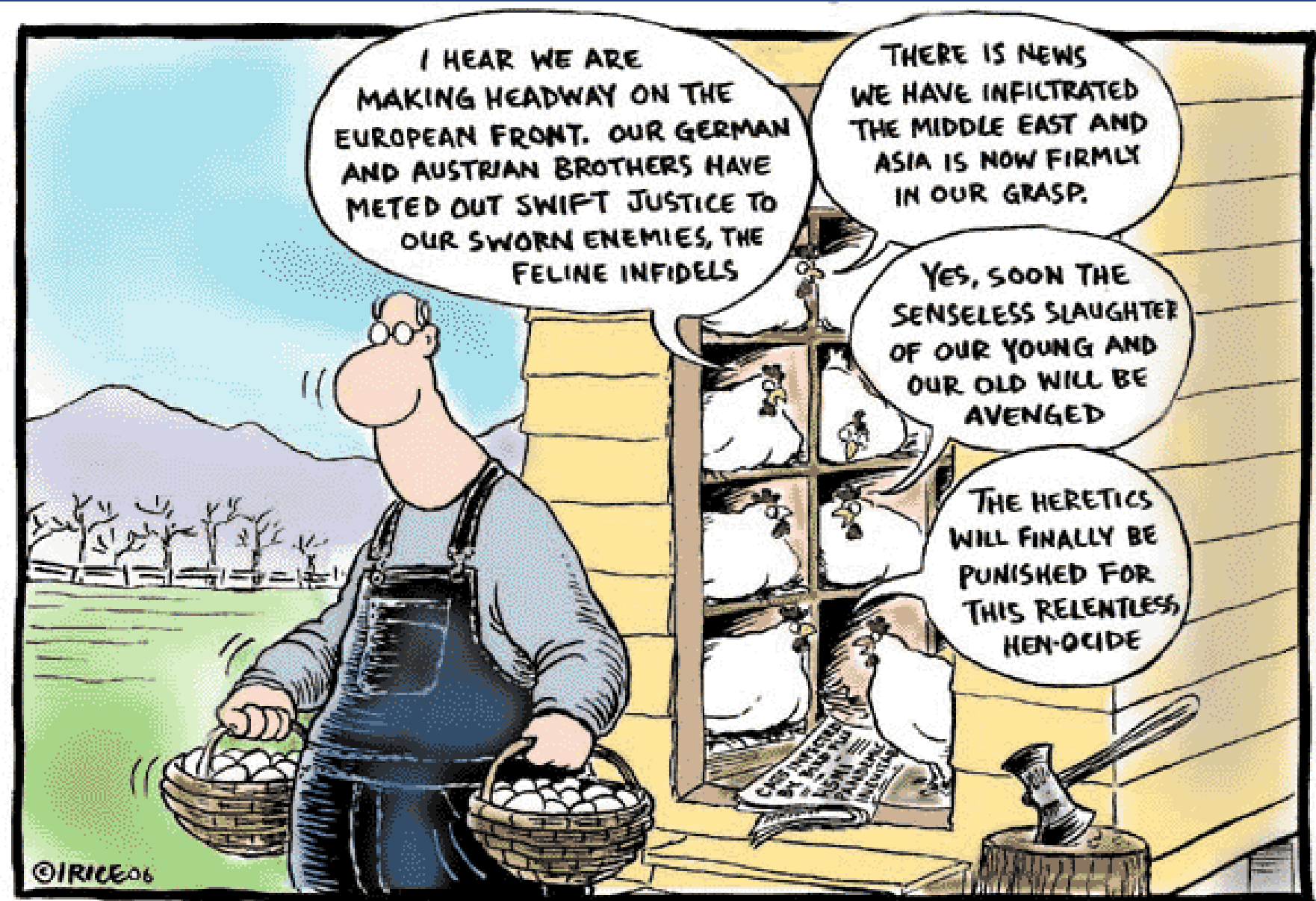




# Federal Guidelines

- Checklists for state, local, and community organization planning
- Antiviral guidelines and purchase plans





I HEAR WE ARE  
MAKING HEADWAY ON THE  
EUROPEAN FRONT. OUR GERMAN  
AND AUSTRIAN BROTHERS HAVE  
METED OUT SWIFT JUSTICE TO  
OUR SWORN ENEMIES, THE  
FELINE INFIDELS

THERE IS NEWS  
WE HAVE INFILTRATED  
THE MIDDLE EAST AND  
ASIA IS NOW FIRMLY  
IN OUR GRASP.

YES, SOON THE  
SENSELESS SLAUGHTER  
OF OUR YOUNG AND  
OUR OLD WILL BE  
AVENGED

THE HERETICS  
WILL FINALLY BE  
PUNISHED FOR  
THIS RELENTLESS  
HEN-OCIDE

# Vaccines and Antivirals

- Two million doses H5N1 vaccine made; 8 million more contracted
- New H5N1 vaccine produces adequate immune response in 60% of cases
- Antiviral Medications
- H5N1 resistant to adamantanes (Symmetrel); 15% resistant to neuraminidase inhibitors (Tamiflu)

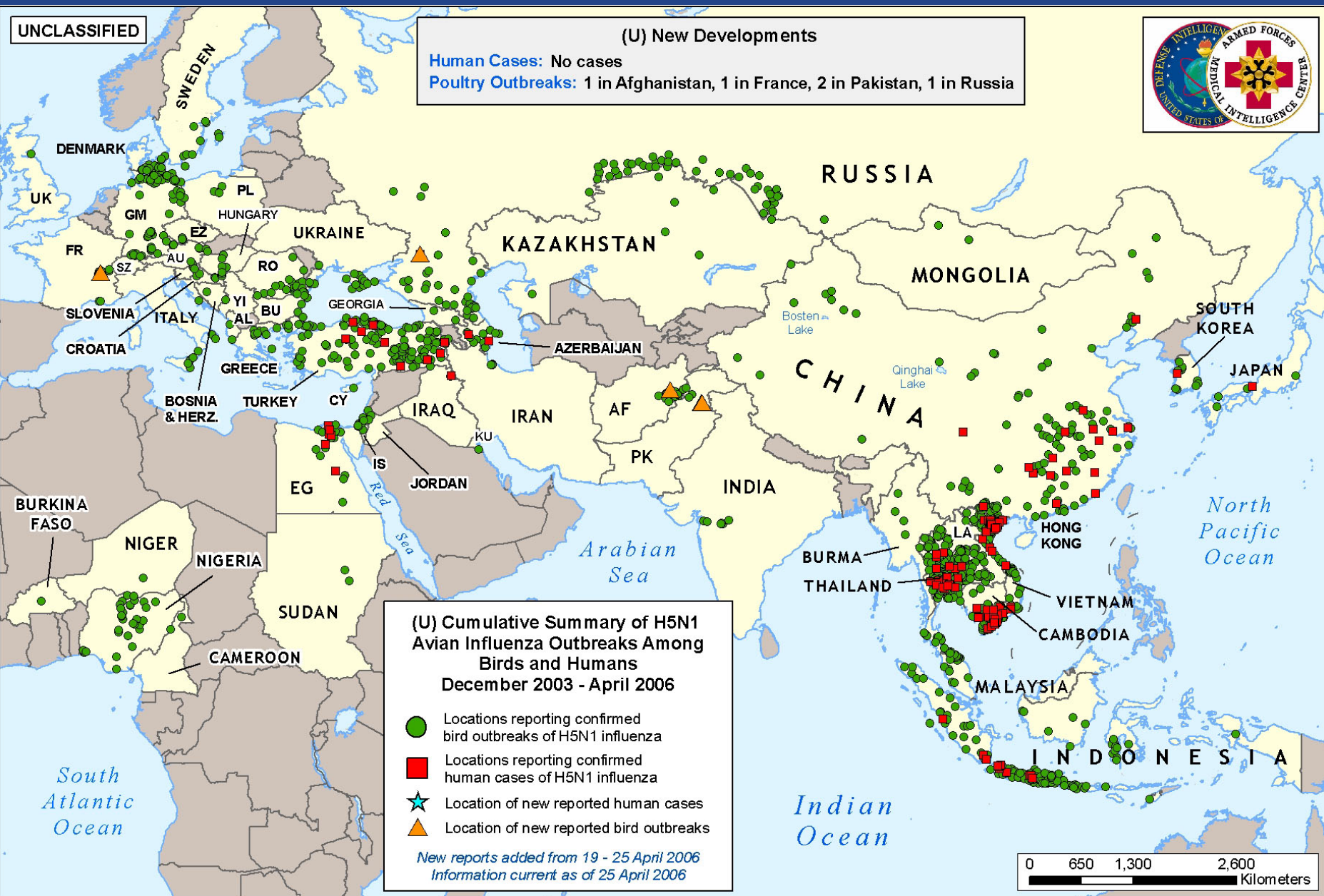




## “Bird Flu” and Pandemics

- Pandemic flu and “bird flu”
- Where is H5N1?
  - Asia, Middle East, Africa, Western Europe
- As of August 23<sup>rd</sup>: 241 human cases with 141 deaths
- No widespread human-to-human transmission; no evidence virus has mutated into a form easily passed from person-to-person
- Not seen in North America





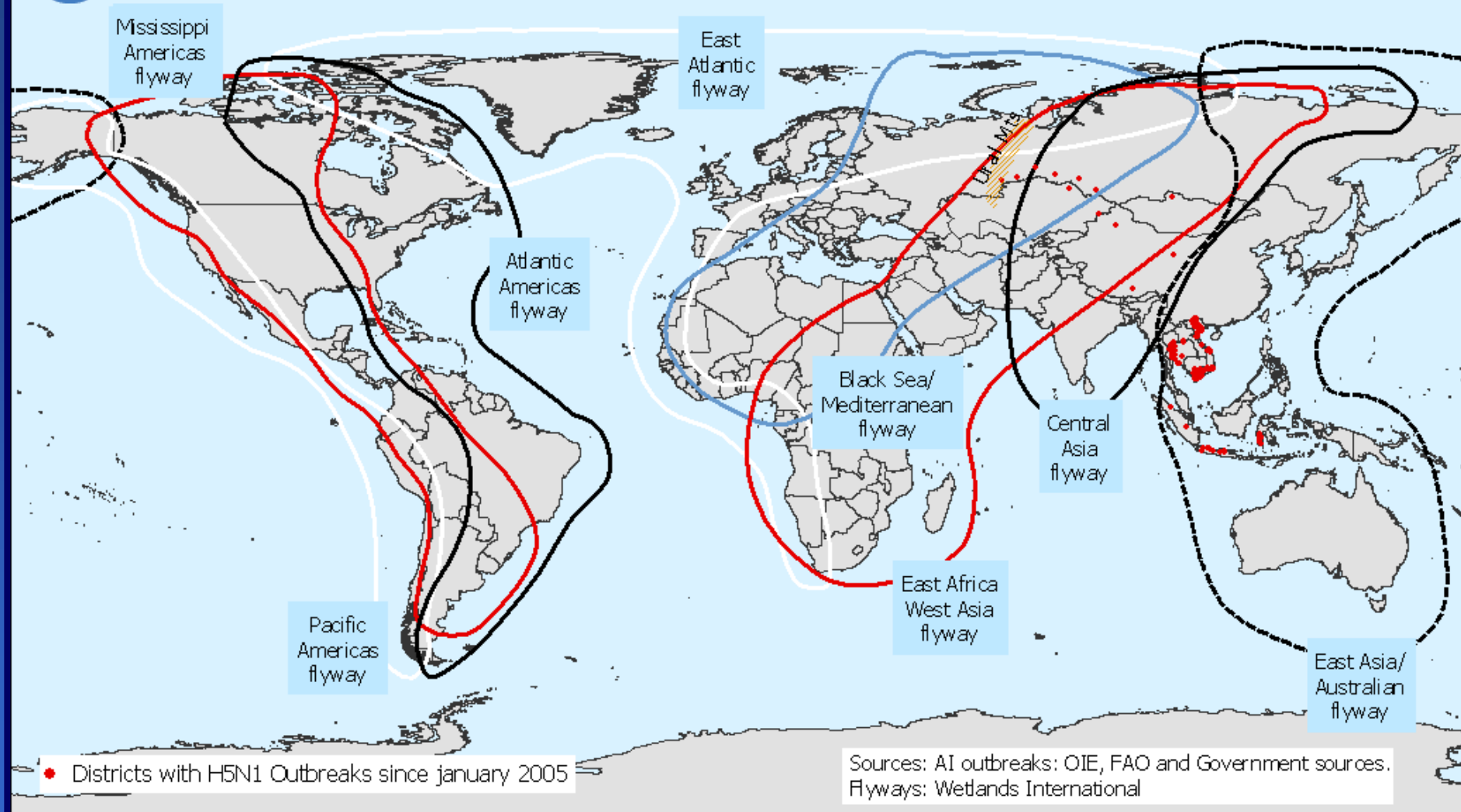
Current as of 25 April 2006





## H5N1 outbreaks in 2005 and major flyways of migratory birds

Situation on 30 August 2005



**Bird Flu Outbreak Path; does not follow major bird migration flyways.**

**UNCLASSIFIED**

# What Can Individuals Do?

- “The Flu is Still the Flu”
- Prevention is key!
- Treatment remains the same
- Be concerned, but be confident
- You can help keep yourself and your family safe from influenza...now and in the future!





“The pandemic clock is ticking, we  
just don’t know what time it is”  
---E. Marcuse

“Does anybody really know what  
time it is?”  
---Chicago





# Questions?

[www.kdheks.gov](http://www.kdheks.gov)